

1 CLAIMS:

1. A method for ablating tissue within a tubular region of or near the heart having an inner circumference, the method comprising:

5 inserting into the tubular region an ablation assembly at a distal end of a catheter, the catheter comprising an elongated tubular catheter body having proximal and distal ends, an axis, and at least one lumen extending therethrough, and wherein the ablation assembly has a preformed generally circular curve having an outer circumference and being generally transverse to the axis of the catheter body, the ablation assembly comprising a generally circularly curved flexible tubing having proximal and distal ends, the flexible tubing carrying a tip electrode at its
10 distal end;

contacting the inner circumference of the tubular region with at least a portion of the outer circumference of the generally circular curve so that the tip electrode is in a first position in contact with tissue along the inner circumference of the tubular region;

15 ablating the tissue along the inner circumference of the tubular region at the first position with the tip electrode;

rotating the ablation assembly so that the tip electrode is in a second position in contact with other tissue along the inner circumference of the tubular region; and

ablating the other tissue at the second position with the tip electrode.

20 2. A method according to claim 1, wherein the tubular region is selected from the group consisting of pulmonary veins, the coronary sinus, the superior vena cava, and the inferior vena cava.

25 3. A method according to claim 1, wherein the tubular region is the pulmonary vein.

4. A method according to claim 1, wherein the tip electrode has an exposed region that is generally cylindrical.

1 5. A method according to claim 1, wherein the tip electrode has an exposed region,
at least a portion of which has an outer diameter greater than the outer diameter of the flexible
tubing of the ablation assembly.

5 6. A method according to claim 1, wherein the generally circular curve has an outer
diameter ranging from about 10 mm to about 25 mm.

 7. A method according to claim 1, wherein the generally circular curve has an outer
diameter ranging from about 12 mm to about 20 mm.

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 8. A method according to claim 1, wherein the generally circular curve is at least
about 320°.

 9. A method according to claim 1, wherein the generally circular curve is at least
15 about 360°.

 10. A method according to claim 1, wherein the generally circular curve consists of a
single generally circular curve.

20 11. A method according to claim 1, wherein the ablation assembly further comprises
a support member comprising a material having shape memory extending through at least a
portion of the flexible tubing.

 12. A method according to claim 1, further comprising an intermediate section
25 disposed between the catheter body and the ablation assembly, the intermediate section having at
least one lumen extending therethrough and being more flexible than the catheter body.

 13. A method for ablating tissue within a tubular region of or near the heart having an
inner circumference, the method comprising:

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1 inserting into the tubular region an ablation assembly at a distal end of a catheter, the
catheter comprising an elongated tubular catheter body having proximal and distal ends, an axis,
and at least one lumen extending therethrough, and wherein the ablation assembly has a
preformed generally circular curve having an outer circumference and being generally transverse
5 to the axis of the catheter body, the ablation assembly comprising a generally circularly curved
flexible tubing having proximal and distal ends, the flexible tubing carrying a tip electrode at its
distal end, wherein the tip electrode has an exposed region, at least a portion of which has an
outer diameter greater than the outer diameter of the flexible tubing of the ablation assembly;
contacting the inner circumference of the tubular region with at least a portion of the
10 outer circumference of the generally circular curve so that the tip electrode is in a first position in
contact with tissue along the inner circumference of the tubular region;
ablating the tissue along the inner circumference of the tubular region at the first position
with the tip electrode.

15 14. A method according to claim 13, wherein the tubular region is selected from the
group consisting of pulmonary veins, the coronary sinus, the superior vena cava, and the inferior
vena cava.

20 15. A method according to claim 13, wherein the tubular region is a pulmonary vein.

16. A method according to claim 13, wherein the tip electrode has an exposed region
that is generally cylindrical.

25 17. A method according to claim 13, wherein the generally circular curve has an outer
diameter ranging from about 10 mm to about 25 mm.

18. A method according to claim 13, wherein the generally circular curve has an outer
diameter ranging from about 12 mm to about 20 mm.

1 19. A method according to claim 13, wherein the generally circular curve is at least
about 320°.

5 20. A method according to claim 13, wherein the generally circular curve is at least
360°.

 21. A method according to claim 13, wherein the generally circular curve consists of
a single generally circular curve.

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